AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for managing deposits within a pump mechanism by introducing fluid suitable for dissolving, diluting or otherwise disengaging deposits which have accumulated on the internal working surfaces of the pump, the method comprising the steps of:

(a) monitoring the performance of the pump;

(b) receiving process data from, or directly associated with, a tool being evacuated by the pump, wherein the tool is configured to receive various gas streams for performing chemical reaction to produce a predetermined material;

(c) calculating fluid flow characteristics required to compensate for the accumulation of deposits on the internal working surfaces of the pump caused by exhaust gases evacuated from the tool by the pump based on the monitored performance of the pump and the process data of the tool; and

(d) introducing fluid into the pumping mechanism at a localized area via a predetermined port selected from a plurality of ports within the pump in accordance with the calculated characteristics, thereby avoiding a backward contamination of the tool by the fluid.

2. (Previously Presented) The method according to Claim 1 wherein the fluid comprises a halogen.

3. (Previously Presented) The method according to Claim 2 wherein the fluid comprises a fluorinated liquid or gas.

4. (Previously Presented) The method according to Claim 1 wherein the fluid comprises inert purge gas.

5. (Previously Presented) The method according to Claim 4 wherein the purge gas is delivered at an elevated pressure.

6. (Previously Presented) The method according to Claim 5 wherein the purge gas is delivered at a pressure in excess of 2000 mbar.

7. (Previously Presented) The method according to Claim 2 wherein a second fluid is also introduced to the pump, this second fluid being inert purge gas.

8. (Previously Presented) The method according to Claim 7 wherein the first and second fluids are introduced at different locations in the pump.

9. (Previously Presented) The method according to Claim 8 wherein the first fluid is directed to the internal working surfaces of the pump.

10. (Previously Presented) The method according to Claim 8 wherein the second fluid is directed towards sealing components of the pump.

11. (Previously Presented) The method according to Claim 7 wherein the second fluid is introduced after injection of the first fluid has terminated.

12. (Previously Presented) The method according to Claim 1 wherein the fluid flow characteristics are selected from the group of flow characteristics consisting of flow rate, temperature, pressure and duration of injection.

13. (Previously Presented) The method according to Claim 1 wherein the fluid is introduced during normal operation of the pump.

14. (Previously Presented) The method according to Claim 13 wherein the fluid is introduced into an exhaust section of the pump.

15. (Previously Presented) The method according to Claim 1 wherein the fluid is introduced when the pump is off line.

16. (Previously Presented) The method according to Claim 1 wherein the monitoring step comprises recording pressure at the exhaust of the pump.

17. (Currently Amended) A pumping arrangement comprising:

a vacuum pump having a rotor element and a stator element, and at least one fluid port;

means for monitoring the performance of the pump;

means for receiving process data directly from a tool adapted to be evacuated by the pump, wherein the tool is configured to receive various gas streams for performing chemical reaction to produce a predetermined material;

means for calculating fluid flow characteristics required to compensate for the accumulation of deposits on the internal working surfaces of the pump caused by exhaust gases evacuated from the tool by the pump based on the monitored performance of the pump and the process data of the tool; and

means for introducing fluid into the pump at a localized area via the at least one port selected from a plurality of ports within the pump ~~and~~ in accordance with the calculated characteristics~~, fluid~~ for acting on deposits located on the element surfaces to enable the deposits to be removed therefrom in a manner that avoids backward contamination of the tool by the fluid.

18. (Previously Presented) The method according to Claim 3 wherein a second fluid comprising an inert purge gas is introduced to the pump.

19. (Previously Presented) The method according to Claim 9 wherein the second fluid is directed towards sealing components of the pump.

20. (Currently Amended) The ~~pump~~ method according to Claim 1 wherein the monitoring step comprises recording motor current of the pump.